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AUTHOR Azumi, Jann E.
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ABSTRACT

This paper hypothesizes that both the structure and function of school systems are influenced by the following environmental factors: the institutional division of labor, the degree of homogeneity, the degree of stability, the degree of competition, and the amount and source of funding. Support for the hypotheses relies on open systems theory and focuses on the nature of relationships between environmental and organizational factors as to better understand the differences in school organization and the difficulties involved with implementing school reforms. Five pages of references are provided. (JAM)

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ENVIRONMENTAL FACTORS INFLUENCING SCHOOL ORGANIZATION

Jann E. Azumi
Newark Board of Education

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Environmental Factors Influencing School Organization

Introduction

Various organizational models have been used in the attempt to describe and understand schools and school systems. None by itself seems sufficient, however, to account for the differences in school organization. In spite of a similar technology (one of the determinants of organizational structure) organizational differences between schools do exist. Firestone and Herriott (1982) identified two "clusters" of schools, one fitting a rational bureaucratic model and the other a loosely coupled model. The distinction, confirmed in a larger study (Herriott and Firestone,1984), was primarily between elementary and secondary schools. The authors indicated that the complexity and size of secondary schools probably account for at least some of the differences in organization.

The effective schools research suggests that an organic model (Burns & Stalker, 1961), typical of more professional organizations, and different from a mechanistic model, is characteristic of those schools with higher student achievement (Azumi & Kottkamp, 1984; Firestone & Wilson, 1987). More recent research on effective schools reveals that the SES makeup of the school affects some of their organizational attributes (Hallinger & Murphy, 1986; Spade, Vanfossen & Jones, 1986). Given the plethora of research evidence regarding effective schools characteristics and the paucity of effective schools in the real world, however, one might assume that there are factors influencing school organization that are beyond the purview of the school.

Unfortunately, the school effectiveness literature does not tell us why certain characteristics are not now in schools (Purkey and Smith, 1983).

Most of the effective schools research treats the school as a closed system rather than an open system. Internal factors do matter, but organizations do not exist in a vacuum. They affect and are affected by their environments. The environment provides constraints, uncertainties and contingencies to which the organization must adapt (Aldrich and Pfeffer, 1976). In turn, organizational members make decisions regarding the nature of the adaptation and can reshape the environment. School systems have specified geographic boundaries within which they are obliged to accept all residing children; community members comprise the governing Board of Education; local property taxes support local schools (to a varying degree). The subsequent differences in size, resources, population characteristics, and stability impact upon the system in a myriad of ways. Although, as Meyer and Rowan (1983) note, the institutional rules and roles of schooling may be shared by the society, local variations in environmental categories affect local school systems. Thus, to better understand local school systems we must begin to explore those environmental categories and the nature of their impact.

The most relevant agents in an organization's environment are those that affect goal setting and goal attainment. Dill (1958) identifies them as customers or clients, suppliers, competitors, and regulators, and refers to these as the "task environment". The task environment can be conceptualized along

various dimensions. Thompson (1967) used the degree of homogeneity and the degree of stability in his propositions regarding boundary-spanning structures (pp. 68 ff). Duncan (1972) identified task environments as being simple or complex and static or dynamic. Aldrich (1979) outlined six dimensions of environments: 1) domain consensus/dissensus, 2) capacity, 3) stability/instability, 4)turbulence, 5) homogeneity/heterogeneity, and 6) concentration/dispersion. Dess and Beard (1984) narrowed the number, substituting dynamism for stability/instability and turbulence, and complexity for heterogeneity/homogeneity and concentration/dispersion. Azumi and Hage (1972) discussed the importance of interinstitutional networks in terms of the division of labor among organizations, noting that the functions of a given organization are affected by the degree to which other organizations in the environment fulfill environmental needs. The degree of competition was an important environmental variable influencing the structure of manufacturing organizations in a study by Pfeffer and Leblici (1973).

These conceptions are useful in developing propositions regarding environmental sources of variation in school organizations. In this paper I am hypothesizing that both the structure and function of school systems are influenced by the following environmental factors:

1. the institutional division of labor
2. the degree of heterogeneity
3. the degree of stability
4. the degree of competition
5. the amount and source of funding (indicative of capacity).

This is not meant to be an exhaustive list of the salient environmental variables but, rather, a beginning step. The focus here is on the nature of the relationships between environmental and organizational factors so as to better understand the differences in school organization, with a particular concern for the correlates of effective school organization.

The organizational attributes of school systems hypothesized to be affected by these environmental factors include those that have been identified as being important for school success and found in other organizational studies to be affected by the environment. Again, the list is not meant to be exhaustive. In particular, the organizational variables are: the number of functions (goals) and the degree of consensus regarding those goals, the degree of control and coordination (coupling), the degree of complexity, and the degree of administrative intensity..

Goals are included under functions here in order to encompass both "official" and "operative" goals (Perrow, 1961a). The degree of control and coordination or coupling refers to the extent of linkages in the system and not the kind, i.e. control and coordination can be achieved through formal rules and sanctions, or, as is the case in professional organizations, through feedback and socialization (see Azumi & Madhere, 1983; Hage, 1980). Also, the focus is on the control and coordination of the core technoloy, i.e. instruction, as opposed to other activities of the system. Complexity refers to the number of occupational specialists and the level of training required for each (Hage,

1965). Administrative intensity is determined by the proportion of administrators in a district.

There may be connections among the environmental variables as well as among the organizational variables. In the case of the latter, especially, there is evidence to support configurations, e.g. the "clusters" in the Firestone and Herriott studies (1982, 1984)), as well as evidence to support independent variation (Hall, 1963). The propositions which follow are presented initially as though there were no linkages. Later in the paper I shall address the question of possible relationships, particularly those that are conducive to successful outcomes.

The Institutional Division of Labor

Proposition 1. School systems will have more functions and less goal consensus when there is a lower institutional division of labor.

Proposition 2. School systems will be more complex when there is a lower institutional division of labor.

Proposition 3. School systems will be more loosely coupled when there is a lower institutional division of labor.

Schools, like all organizations, exist to fulfill environmental needs. What they are called upon to do depends, in part, upon what other organizations there are in the environment to meet the needs of the population. Generally, in industrialized countries there is a high institutional division of labor with different institutions fulfilling different needs, whereas in developing countries there is often an overlapping of functions among institutions, so that economic institutions fulfill

political or welfare functions as well (Presthus, 1972), i.e. there is a low institutional division of labor.

I am suggesting here that in some communities in the U.S. there has been a breakdown in the institutional division of labor and, as a result, greater demands are being made of school systems. In particular, the weakening of the family and changes in the economy have had a major effect on school organizations.

The "traditional" family, consisting of a mother at home, a father at work and two or more children, accounted for four percent of the nation's households in 1983 (compared to 60% in 1955). Seven out of ten women between the ages of 17 and 44 were in the work force; half of the women who had children in 1983 were back on the job within one year. Almost a quarter of all children under 18 years of age lived in single parent households; nine out of ten single parent households were headed by women, many of whom are undereducated, unemployed, have incomes below the povery line and live in central cities. In 1983 the statistics were as follows:

50% of children living in female headed households had mothers who were unemployed
62% were in families with incomes under $10,000
36% had mothers who did not complete high school
42% lived in central cities.

An increasing number of teenage girls are having children out of wedlock. Fourteen percent of the births in 1983 were to girls under 20, and 55% of these were to unmarried girls.

The implication of these numbers is that the responsibilities for raising children are being abdicated by the family because the family is no longer a viable unit. In the central

cities and other communities where this population is sizable, the schools are being called upon to assume greater and greater responsibilities for childrearing. In order to do so, the complexity of the school increases as programs and/or personnel are added to the system. Some examples will suffice to illustrate the point: free breakfast and free lunch programs, courses on sex education and family living, public all-day kindergarten programs, public pre-school programs for 3 and 4 year olds.

Pressures for the school to assume greater "familial" functions come from within the school organization as well. It is more difficult to teach children who come to school ill prepared to assume the student role, e.g. those without adequate nourishment or without "readiness" skills. Expanding the school's domain by providing food or pre-school education is in the interest of the school because, by controlling such contingencies, the teaching task becomes more certain. This idea supports Thompson's proposition regarding the organization's tendency to widen its boundaries as a means of reducing contingencies (1967, p. 39).

Another change which has impacted upon school systems in the Northeast, in particular, has been the decline of the manufacturing industry, resulting in a loss of jobs. For example, the most recent figures from the Bureau of Labor Statistics reveal that over 103,000 blue collar factory jobs and 1,100 manufacturing plants were lost in the state of New Jersey during the 1980's, continuing a downward trend and making employment in the manufacturing sector in the state the lowest since 1940 (The Star

Ledger, February 4, 1987, p. 17). While the majority of people do find other jobs, there are significant numbers who do not. Nationally, 36% of the dislocated workers in the 1980's did not find other jobs; in New Jersey 35% did not; and in neighboring New York 45% were not able to secure other employment.

The primary reason for the difficulty is that the smokestack industries are being replaced by information processing and high tech industries requiring greater job skills. Between 1970 and 1984, for example, New York City lost nearly 500,000 jobs in which the average worker had less than a high school degree. Between 1959 and 1984, the city gained 518,000 jobs in which employees typically had at least some college education (from an unpublished study by John Kasarda, reported in Education Week, October 29, 1986, p. 17). Thus, the loss of manufacturing plants has resulted in high unemployment in those older industrial cities most hard hit by the decline, and for the black male population who were overrepresented in these industries (Wilson, 1987).

In a community of high unemployment, there are pressures to employ residents in the school system. The school system is controlled by the local Board of Education, which is elected by the community or appointed by elected city officials. Board of Education members, therefore, are particularly susceptible to pressures from the community. A recent article in a major New Jersey newspaper accused the Newark Board of Education of being primarily an employment agency (The Star Ledger, September 29, 1986). Boyd (1982) states that researchers at Harvard only began

to understand the behavior of the Boston Board of Education when they realized that it acted as the head of an employment agency rather than an educational organization. More recently, political leaders in both Boston and New York city chastized their respective boards of education as being more concerned with providing patronage jobs than with improving student performance (Education Week, January 14, 1987, p.1). Employing local residents is not an official goal of any educational system. I am suggesting, rather, that in some systems it becomes an informal operative goal because there are not sufficient employment opportunities elsewhere in the community.

Finally, the school system is an important resource for other organizations in the community, as whatever contracts are awarded by the system for books, supplies, food, etc. are sources of income for others. In an impoverished institutional environment, providing for the welfare of other organizations becomes another important function for the school system.

The fact that school systems are called upon to perform services other than academic instruction means not only that programs and personnel are added accordingly, but that control and coordination mechanisms are diffused, at best. At worst, they are applied to functions other than the core technology. As Perrow (1978) notes, a superintendent is not fired because reading scores do not improve, but failure to perform his/her regulatory functions can bring trouble. In their study of principals in the Chicago school system, Crowson and Morris (1982) conclude that principals are rarely dismissed for poor

teaching in their schools, but are quickly relieved of their duties if they cannot manage community unrest.

The Degree of Certainty or Stability

Proposition 1. School systems in less stable environments are more complex.

Proposition 2. School systems in less stable environments will have greater administrative intensity.

Proposition 3. School systems in less stable environments are more loosely coordinated.

Any or all components of the task environment of school systems can produce uncertainties. Population transience and/or birth rate fluctuations cause greater changes in enrollment. Some school systems experience greater changes in revenue as local taxpayers revolt, or federal and/or state funding shifts with the political winds. State regulations are more variable in some states than others, particularly when a concern for education is perceived as a political asset (as some governors, currently, seem to think). The literature suggests that such instabilities will result in greater complexity.

Unstable environments produce greater contingencies, according to Thompson (1967), and there is a tendency for organizations to establish additional structural units to deal with the contingencies. Lawrence and Lorsch (1967) found this to be true in their well known study of organizations in the plastics, container, and food industries. Those organizations or subunits of organizations in rapidly changing environments had a higher degree of differentiation than those in more stable environments. Changes in public school enrollments were associated with an

increase in the proportion of professional support staff in public school districts in California (Freeman & Hannan, 1975). Similarly, changes in revenue also had positive effects on personnel components (Freeman, 1979). Some school systems with funding uncertainties have added offices to seek outside grants and to establish partnerships with the business community. Also, if a community cannot be counted on to be supportive of its schools, the school system may hire public relations personnel to publicize the successes of the school and to establish better communication linkages with other community organizations.

Organizations also increase their administrative staff to manage uncertain relationships and to ensure a stable flow of resources. Tolbert (1985) found that in institutions of higher learning greater administrative intensity was more likely to occur in uncertain environments, particularly when the exchange relations were not institutionalized. In their study of the effects of changing public school enrollments in California school districts, Freeman and Hannan (1975) concluded that "oscillations in demand for an organization's products or services may produce an increase in administrative intensity even if there is no upward trend in the oscillations" (p. 227). This conclusion was based on their finding that with both growth and decline in enrollment, the teaching staff rose and fell accordingly, whereas the administrative staff rose accordingly but did not decline as much. This supported Freeman's earlier study of manufacturing organizations (1973) in which he found that those

in changeable environments had higher levels of administrative intensity. (However, evidence from follow-up studies of the California districts (Hannan & Freeman, 1978; Freeman, 1979) suggested that adjustments in staff size were due in part to internal political struggles rather than administrative rationality, particularly in periods of decline.)

Weick (1976) noted that loose coupling was functional in uncertain environments because risks could thereby be divided. The component groups could respond to uncertainty separately so their respective mistakes would not affect the whole organization. Also, loose coupling allows the component groups to be more responsive (Weick, 1986). In a study of 64 subunits in 21 large companies in Vancouver, Tung (1979) found that a high change rate (measured by the frequency and magnitute of change among components in the environment) was associated with perceived environmental uncertainty and a less mechanistic, i.e. a more loosely coupled, structure.

The Degree of Competition

Proposition 1. Control and coordination linkages will be tighter in those school systems in competitive environments.

Proposition 2. School systems in competitive environments will be less complex (except for systems in high SES communities).

Public school systems have been described as "domesticated" organizations (Carlson, 1964), that is, they have no control over the selection of clients and the clients are assigned to designated schools. In reality, however, some school systems and some clients have more choices than others. There are an abundance of

private schools in or near some communities. Public schools in some communities accept students from outside the community on a tuition paying basis. Some parents can "shop around" for the school and/or community that most nearly meets their standards.

In their study of manufacturing organizations Pfeffer and Leblici (1973) found that increased competition resulted in a greater demand for control and coordination. There were more frequent reports and more written communication. Similarly, I am hypothesizing that schools that are in competitive situations have a greater need to demonstrate success in order to keep and/or attract students. They have to be more accountable, which means that control and coordination linkages must be tighter. One of the control mechanisms being used currently is that of standardized tests. In the case of New Jersey the results of its statewide testing program are published in local newspapers. All school systems have hard questions to answer if their test results are low, but those which compete for students are especially vulnerable.

Pfeffer and Leblici (1973) also found that when there is less competition, there is more "slack", giving the organization an opportunity to do more than its routine activities. Thus, there are more frequent changes in product design, production process and number of products. When competition is great, the organization cannot afford to fail so there is a reluctance to try new things. This would seem to indicate that complexity is greater in noncompetitive environments. In the case of schools, Boyd (1982), for example, states that when schools don't have

pressure to satisfy clients, bureaucrats within the schools seek to maximize executive benefits and maximize internal units.

I suspect, however, that the effects of competition are different depending on the interaction of competition with other variables. School systems in more competitive environments are often in more affluent environments. While high student achievement on standardized tests is a necessary condition for success, it is not sufficient. There is an expectation that students be well-rounded, challenged, and provided with the wherewithal to get into good colleges. Thus, in order to attract students (and their parents), schools in competitive environments need to have a variety of offerings e.g. gifted and talented programs, honors courses, Advanced Placement courses, field trips, computer science, and other "enrichment" activities. One local system, seeking to attract students away from private schools, revamped its curriculum to include public speaking, creative writing, and a philosophy course starting in the fifth grade (reported in The Record, September 16, 1987, p. B3).

Another component found in organizations in competitive environments is public relations. Thompson (1967) proposes that organizations competing for support seek prestige. Perrow (1961b) in his study of hospitals noted than an organization that is well regarded will more easily ensure an adequate amount of clients, donors, etc. School systems must "sell themselves" in order to be perceived in a favorable light. The words of a local school board president illustrate the point, "We had to market our school or lose it" (The Record, September 16, 1987, p. B3). As

noted earlier , this upper middle class district was losing about 30% of its school population to private schools which, together with a declining birth rate, was forcing the closing of a school. School trustees began hosting informal meetings in private homes, and new families were sent special invitations to visit the schools as part of the effort to attract a public school clientele.

The Amount and Source of Funding

Proposition 1. The greater the resources, the more complex the school system.

Proposition 2. The greater the reliance on local taxes as sources of funding, the more tightly coupled the school system.

Proposition 3. The less the reliance on local taxes, the more complex the school system.

Local property taxes have traditionally been the major source of funding for education in the United States. Needless to say, there is tremendous variation from one community to another in the amount of money available for school budgets. Some communities have considerably higher ratables than others; some communities are more willing than others to tax themselves for education. In order to have some modicum of equity in school funding, those communities with fewer local resources receive greater amounts of money from the state and/or federal government. Also, in recent years both state and federal governments have earmarked money for particular populations (bilingual, special education, etc.), thus, those districts with such populations get more money from outside the local community. Nevertheless, there remain great discrepancies in per pupil expenditure

from one district to another throughout the country, and great differences in the degree to which money for schooling comes from the local community.

Greater resources allow districts to provide innovative or specialized programs - programs beyond the basics. This notion was substantiated in a study of New Jersey school districts (Azumi, J., 1979) and in Bidwell and Kasarda's study (1975) of Colorado school districts. Those districts which had a higher per pupil expenditure had a larger professional support staff/teacher ratio indicating greater complexity. Similar findings emerged from a study of state employment agencies (Klatzky, 1970). Agencies in wealthier states engaged in a wider range of programs than those in poorer states.

School systems which rely almost exclusively on local taxes for support, i.e. have a single supplier of funds, are more dependent (K. Azumi, 1972). Organizations which are dependent on their environments are vulnerable, and seem to react by "tightening" their stuctures, i.e. they are more centralized and more formalized (Freeman, 1973; Pugh et al, 1968; Khandwalla, 1972). We would expect to find, then, that there will be tighter coupling mechanisms in those school systems which derive their money primarily from the local community. Those districts which receive money from the state, the federal government, as well as from local taxes, i.e. have a greater number of suppliers, are more autonomous and, therefore, are looser in structure.

Greater autonomy also means greater flexibility for the system, allowing for the introduction of innovative programs..

Corwin (1975) found that schools which get aid from outside the community initiate a greater variety of programs than do schools which rely on local funding. Fuller and Izu (1986) noted that external funding buffers the school organization from local pressures and exigencies, allowing for greater organizational flexibility.

The Degree of Heterogeneity

Proposition 1. School systems in more heterogeneous communities will have a greater number of goals/functions and less consensus regarding goals.

Proposition 2. School systems in more heterogeneous communities will be more complex.

Proposition 3. School systems in more hetergeneous communities will be more loosely coupled.

School systems in more demographically heterogeneous communities, i.e. those with greater variation in ethnic group membership or socioeconomic status, will have more diffuse pressures and, thus, more goals than those in homogeneous communities. In a study of voluntary organizations Simpson and Gulley (1962) found that those responding to varying environmental demands had many more goals than those responding to specific and restricted external pressures.

Although all parents may aspire to a "good" education for their children, there are often differences in the meaning of that term. For some it may mean a structured classroom with heavy emphasis on the three R's; for others it may mean an open classroom where children have opportunities to exercise independent judgment and develop creative skills. As Bowles and Gintis (1976) have noted, there are class differences in the

expectations that parents have for both the process and the outcome of their children's schooling. Working class parents favor stricter educational methods, whereas professional and self-employed parents prefer a more open atmosphere (p. 133). In a study of teaching style preferences Sieber and Wilder (1973) found that a greater percentage of working class mothers preferred control oriented teachers than did middle class mothers. More middle class mothers than working class mothers preferred discovery oriented teachers. These class differences held for both white and black mothers. Occupational differences regarding high school curriculum priorities were evident in a Canadian mass opinion survey (Livingstone, 1985). Asked whether the emphasis should be on job skills, basic skills, or creativity and critical thinking skills, the majority of industrial workers chose job skills whereas only 18% of corporate executives made that choice. Creativity and thinking skills were the choice of 35% of the professionals and 29% of the corporate executives, but only 6% of the industrial workers made that choice.

Leiter (1983) noted that when there is community factionalism, as often occurs in heterogeneous communities, the principal of a school becomes a boundary spanner or buffer and does not attend to consensus building activities. Rather, the role is one of trying to keep community dissatisfaction from directly disprupting the technical core. In a later study, Fuller and Izu (1986) found that there was less convergence of teachers' beliefs in schools in heterogeneous communities.

Further evidence that there is less consensus regarding goals when there is a heterogeneous school population comes from studies of public and private schools. There is a stronger sense of community and less conflict among all members of the educational community (teachers, parents, students, administrators) in private schools than in public schools (Hannaway and Abramowitz, 1985). That there is a higher value consensus in private schools is due to the fact that selection processes on the part of the staff and students are voluntaristic (Salganik and Karweit, 1982). In the case of public schools, where students must go and schools must accept them, there is likely to be a lack of value consensus, particularly in communities with heterogeneous populations.

There is greater program diversity, i.e. complexity, in high schools attended by a heterogeneous student population. Comprehensive public high schools offer a variety of academic as well as vocational courses. Environmental variability was found to provide stimulation to school districts, resulting in a greater number of innovations (evidence of greater complexity) in Baldridge and Burnham's (1975) study of school districts.

American educational organizations are loosely coupled in general because of the pluralism of their environments (Meyer, Scott & Deal, 1983). Loosely coupled organizations are able to respond more to environmental pressures than tightly coupled ones (Meyer & Rowan,1983). The more diffuse the environmental pressures, then, the more loosely coupled the educational organization.

Environment and Effective School Organization

Despite school improvement efforts being made at local, state and national levels, actual improvement is not very widespread. The propositions presented above shed some light as to why that is so. Internal factors do matter, but they are not all that matters. Rutter, et al (1979) concluded that "it was very much easier to be a good teacher in some schools than it was in others...teaching performance is a function of the school environment as well as of personal qualities" (p. 139). I believe that it is also very much easier to be a good school in some communities than it is in others, that school performance is a function of the community environment as well as of internal factors.

Because the ultimate concern here is the link between the environment and effective school organizations, i.e. those with positive student outcomes, in this section of the paper I would like to outline some possible relationships among environmental, district, school, and student achievement variables.

The evidence from the effective schools research is fairly consistent regarding those characteristics which define a successful school. While the actual number of characteristics vary from one researcher to another, clear-cut goals, high expectations for student achievement, consensus regarding goals, instructional leadership including the supervision of instruction (tight coupling), participative decision making, and a safe and orderly school environment are among those attributes describing effective schools (for evidence, see Austin and Garber, 1985;

Brookover, et al., 1979; Edmonds, 1979; Rutter, et al., 1979). This descriptive profile fits a professional model of organizations, as these are organizational attributes which enhance teacher certainty in what is essentially an uncertain task (Rosenholtz, 1985). Although most of the school effectiveness studies have come from inner city school systems, a recent ethnographic study of four middle class high schools confirms the notion that the organizational context of the school affects the quality of classroom teaching and that good teaching occurrs in schools where the priorities are educational and where teachers participate in educational decision making (McNeil, 1987).

One is more likely to find such schools in systems which are organized accordingly, i.e. those which have fewer functions - especially nonacademic ones, a greater consensus regarding goals, and tighter coupling mechanisms for the core technology (see Peterson, Murphy and Hallinger, 1987, for evidence of superintendent's control and coordination approaches in effective school districts). Complexity and administrative intensity are indicative of a supportive school system insofar as they reflect the fulfillment of diverse academic needs and greater coordination of instruction. In the real world, however, they often reflect the fulfillment of nonacademic needs and the coordination of those activities, and as such have been negatively related to achievement (Bidwell & Kasarda, 1975; Azumi, 1979.)

The propositions presented in this paper are summarized in Table I. Ignoring the complexity issue for the moment, success-

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Table I

Relationships Between Environmental and Organizational Variables

	Functions	Consensus	Tight Coupling	Complexity	Admin. Intensity
Institutional Div. of Labor	-	+	+	-	
Stability			+	-	-
Competition			+	-	
Resources (amount)				+	
Local tax contribution			+	-	
Heterogeneity	+	-	-	+	

fully organized school systems, as described above, are more likely to be found in communities which have a greater institutional division of labor, i.e. with adequate employment and social service facilities available elsewhere in the community. Further, communities which are more homogeneous and more stable are also likely to have more effective school organizations, as are those which have a greater reliance on local taxes, and other schools in the area competing for students. This description fits various suburban communities around the country. The configuration of environmental variables is such that it produces a strong academic press. In many respects the schools of these suburbs resemble private schools.

Those school systems in some of the inner cities of America, on the other hand, have many strikes against them. There is a low institutional division of labor, the clientele is ethnically heterogeneous, resources come from afar, and there is very little competition for students. The environmental press is a negative one. Schools are called upon to serve many functions and the control and coordination linkages are thereby weakened. In addition, they must add programs and administrators to fulfill the needs they are expected to serve - needs which are often nonacademic in nature. In order to succeed academically, then, the school must expend energy insulating itself from the environment (Hallinger and Murphy, 1986).

Wealthy suburbs and poor inner cities represent the extremes of positive and negative environments and are, therefore, most and least likely, respectively, to produce effective schools. In the case of these extremes, the environmental variables do seem to fit together. Most school systems, however, fall somewhere in between these extremes. We need more research to ascertain the degree to which environmental variables correlate with one another, as well as the degree of importance each has, relative to the others, in influencing organizational structure.

As far as the effects of heterogeneity are concerned, I have argued that a heterogeneous population is likely to result in a school system's having multiple functions, greater complexity, and looser control and coordination mechanisms--all of which would mitigate against higher student achievement. In order to enhance student achievement, then, should we segregate

populations by ethnicity, class or religion? No, we should not, because those systems which are made up of students from low SES backgrounds are low achieving systems. Some of the reasons are suggested in the discussion of other variables which correlate with SES (e.g., institutional division of labor) Other reasons have to do with the lack of power of low SES populations in influencing school policies for the benefit of their children. And still other reasons have to do with the direct effects of low SES status on student achievement. Also, one could argue that there are positive educational benefits to having a diverse student population which may not be manifested in student test scores.

Assuming, then, that greater heterogeneity is desirable, greater complexity and greater administrative intensity would be assets in such a school system if they were indicative of academic support. What I think is needed is a closer look at these variables in school systems which have heterogeneous populations.

Similarly, the relationship between resources and effectiveness is confounded by the relationships between resources and other environmental and organizational variables. For example, if greater complexity means that nonacademic concerns are being addressed, then resources would be negatively correlated with achievement. In fact, it has been argued that per pupil expenditure has little or negative effect on student achievement when SES is controlled for (Walberg and Fowler, 1987), the point being that money is not the answer to school ineffectiveness. However, as I found in my own study of New Jersey school districts (Azumi,

1979) high SES suburban districts with nonminority populations spend more money. They also have lower pupil/teacher ratios, and a higher percentage of teachers with at least a Master's degree. The latter was positively associated with student achievement in both high and low SES districts. Further, among the outlier districts, there were differences in pupil/teacher ratios (see Bidwell and Kasarda's (1975) study of Colorado school districts for further evidence). Resources, then, may be a necessary but not sufficient condition for effectiveness. The key is what the money is being spent for within districts with similar populations. When there is high multicollinearity among the independent variables, multiple regression cannot adequately assess the independent effects of each.

Implications

It is the contention here that school reform efforts will have little impact unless and until environmental issues are addressed. Rather than expecting individual schools to bear the sole responsibility for their own effectiveness, we should be cognizant of the need to create more supportive environments . The school/business/community partnerships that seem to be growing are a step in that direction, as are movements to equalize resources and efforts to offer competing educational alternatives within a district, e.g. magnet schools. The social services that schools are being asked to provide must be shared by other agencies in the community if schools are to improve academically.

That schools cannot be expected to solve societal problems has been said before. Rather than bemoaning the lack of success of school improvement efforts, however, educators need to take a wider perspective and recognize that structural changes in other institutions are also necessary for school success.

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